

REMARKS

Please reconsider the application in view of the following remarks. Applicant thanks the Examiner for carefully considering this application.

Disposition of Claims

Claims 1-8 are pending in this application. Claim 1 is independent. The remaining claims depend, directly or indirectly, from claim 1.

Rejection(s) under 35 U.S.C. § 102

Claims 1-5 and 8 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,537,648 issued to Takahashi *et al.* (hereinafter “Takahashi”). For the reasons set forth below, this rejection is respectfully traversed.

The present invention is directed to a molded glass substrate for a magnetic disk. As shown in Figure 1 of the application, a molded glass substrate 11 in accordance with one or more embodiments of the invention comprises principal surfaces 12, a molding-free face 13, and an inner surface 14. The molding-free face 13 joins principal surfaces 12, which are formed by press molding (*see, e.g.*, publication of the Specification, paragraph [0042]). This results in the transcription of the surfaces of a molding die onto principal surfaces 12. In other words, imperfections on the surface of a molding die also exist on surfaces of a molded substrate.

The molding-free face 13, however, is not controlled by a processed surface of a die during molding (*see, e.g.*, publication of the Specification, paragraph [0043]). Accordingly, a molding-free face has a smooth, mirror-finished surface that requires no surface finishing, and is physically distinguishable from a molded surface or a ground surface, which contains marks from molding, grinding, polishing, *etc.* (*see, e.g.*, publication of the Specification, paragraphs

[0021], [0044]). Accordingly, independent claim 1 requires an outer surface joining the upper and lower principal surfaces, where the outer surface is a molding-free face.

In response to the Declaration submitted under 37 C.F.R. § 1.132 by Applicant on December 30, 2005, the Examiner asserts in the final Office Action dated May 3, 2006, that the figures submitted by Applicant are not compared to the closest prior art, Takahashi. However, Takahashi clearly teaches the use of grinding and chamfering to form an end face. Takahashi states: "...an outer peripheral end face was ground to reduce the diameter to 65 mm," and that "the outer peripheral end face and an inner peripheral surface were subjected to predetermined chamfering" (see Takahashi, col. 14, line 64 – col. 15, line 1). Thus, the end face of Takahashi is comparable to that of the prior art figures, *i.e.*, Figures a, c, and e of the comparative examples submitted on December 30, 2005, which show a molded glass substrate that was chamfered according to prior art.

The Examiner asserts that "the figures disclosed in the declaration do not distinctly distinguish between each other besides figure e which depicted a chamfered edge which is different from the smooth edge shown in figure f, however Applicant claimed a 'molding free face' not edge." Applicant previously submitted, in the response dated December 30, 2005, that Figure (e) of the comparative examples shows that the outer surface of a molded glass substrate that is chamfered is distinguishable from the smooth, rounded edge of the outer surface of a molding-free face, which is shown in Figure (f) of the comparative examples. Applicant has claimed an outer surface joining the upper and lower principal surfaces, wherein the outer surface is a molding-free face.

Thus, a clearly distinguishable structural difference exists between an outer surface of a molded glass substrate and an outer surface of a molding-free face, which the Examiner has not rebutted. Further, as a molding-free surface is inherently smooth, grinding,

chamfering, or polishing is not necessary for a molding-free surface, and a substrate is obtained that is more cost-effective than ground, chamfered, or polished surfaces of the prior art (*see, e.g.*, publication of the Specification, paragraphs [0008], [0011]).

The Examiner asserts that the burden is on the Applicant to present evidence from which the Examiner could reasonably conclude that the claimed product differs in kind from those of the prior art. However, as evidenced above, Applicant has in fact presented evidence from which Examiner could reasonably conclude that the claimed product differs in kind from the prior art. Not only have such arguments and explanations been clearly set forth by previous responses, but also, a declaration of one skilled in the art clearly detailing these facts has been submitted.

The Examiner appears to be using personal knowledge to qualify non-obvious differences between a surface that is a molding-free face and a ground, chamfered, or polished surface of the prior art (*e.g.*, Takahashi) and to contest the submitted declaration. To the extent that the Examiner is relying on personal knowledge as the basis of this rejection, Applicant respectfully requests that the Examiner, pursuant to 37 C.F.R. §1.104(d)(2), supply a declaration setting forth specific factual statements and explanation to support such a finding so that these facts can be appropriately cross-examined and rebutted.

Further, the Examiner has asserted in the final Office Action dated May 3, 2006, that a molding-free face is a product by process limitation. This is incorrect. Applicant has clearly defined a “molding-free face.” For example, in the declaration submitted December 30, 2005, a molding-free face is defined as “a surface that is smooth due to not being formed with a mold, and, resultantly, is lacking grinding or chamfering marks.” This meaning is used consistently throughout the specification (*see, e.g.*, publication of the Specification, paragraph [0021]). Contrary to the Examiner’s assertion that a molding-free face is a product by process

limitation, a surface lacking grinding or chamfering marks is not a product by process limitation, but rather a distinct structural limitation.

Again the Examiner appears to be using personal knowledge to rebut factual evidence submitted in Applicant's expert declaration regarding the distinct structural differences between a surface that is a molding-free face and a surface of the prior art (e.g., Takahashi). To the extent that the Examiner is relying on personal knowledge as the basis of this rejection, Applicant respectfully requests that the Examiner, pursuant to 37 C.F.R. §1.104(d)(2), supply a declaration setting forth specific factual statements and explanation to support such a finding so that these facts can be appropriately cross-examined and rebutted.

It would be clear to one skilled in the art that Takahashi does not disclose an outer surface that is a molding-free face as required by the claimed invention. In clear contrast to the claimed invention, Takahashi discloses obtaining a disk-shaped glass substrate through the use of multiple dies or from cutting. Takahashi clearly teaches the use of grinding to form an end face. Takahashi explicitly states: "...an outer peripheral end face was ground to reduce the diameter to 65 mm," and that "the outer peripheral end face and an inner peripheral surface were subjected to predetermined chamfering" (see Takahashi, col. 14, line 64 – col. 15, line 1). As discussed above and in the response submitted on December 30, 2005, a ground or chamfered surface contains marks from the grinding or chamfering that are not present on a molding-free face. Thus, it would be clear to one skilled in the art that the end surface of Takahashi would have grinding or chamfering marks, and that Takahashi does not disclose an outer surface that is a molding-free face as required by the claimed invention.

In view of the above, the chamfered end surface of Takahashi cited by the Examiner is not equivalent to a molding-free face. Further, it would be improper for the Examiner to read the term "molding-free face" any broader than the specific (and unambiguous)

definition provided. Applicant respectfully asserts that the Examiner's broad interpretation of Takahashi is overreaching and has effectively removed explicitly stated limitations within the claims. In particular, the Examiner has construed that teachings in Takahashi directed to a ground and chamfered surface to be equivalent to the limitation "an outer surface joining the upper and lower principal surfaces, wherein the outer surface is a molding-free face." Such an interpretation is improper, as it completely ignores the positive limitation "wherein the outer surface is a molding-free face." Moreover, in direct contrast to this limitation, it would be clear to one skilled in the art that Takahashi does not disclose an outer surface that is a molding-free face as required by the claimed invention.

In view of the above, Takahashi fails to show or suggest the present invention as recited in independent claim 1. Thus, independent claim 1 is patentable over Takahashi. Claims 2-5 and 8, directly dependent from claim 1, are allowable for at least the same reasons. Accordingly, withdrawal of this rejection is respectfully requested.

Rejection(s) under 35 U.S.C. § 103

Claims 6 and 7 are rejected under 35 U.S.C. § 103(a) as being obvious over Takahashi in view of U.S. Patent No. 3,660,061 issued to Donley *et al.* (hereinafter "Donley"). For the reasons set forth below, this rejection is respectfully traversed.

As discussed above, Takahashi fails to show or suggest all the limitations of independent claim 1. Donley does not show or suggest all the limitations of independent claim 1. Further, Donley fails to show or suggest that which Takahashi lacks. This is evidenced by the fact that Donley is relied on only in an attempt to render obvious limitations relating to grinding and polishing a surface and fire polishing a surface (*see* Office Action of June 30, 2005, pages 4-5). In contrast to the claimed invention, Donley is directed to producing a coated sheet

of glass to provide desired properties to the glass (*see* Donley, Abstract). Donley is completely silent with respect to an outer surface that is a molding-free face, as required by independent claim 1 of the invention.

In fact, as Donley is directed to coating sheets of plate glass (*see* Donley, col. 8, lines 27-30) and not to molded glass substrates, it would be clear that without the present application as a guide, one skilled in the art would not look to Donley to address issues related to molded glass substrates. The present application *cannot be used as a guide* in reconstructing elements of prior art references to render the claimed invention obvious. *In re Vaeck*, 947 F.2d 488 (Fed. Cir. 1991) (emphasis added). Thus, Donley is not properly combinable with Takahashi.

In view of the above, Takahashi and Donley, (i) whether taken separately or in combination, fail to show or suggest the present invention as recited in independent claim 1, and (ii) are not properly combinable. Thus, claims 6 and 7, directly dependent from claim 1, are patentable over Takahashi and Donley. Accordingly, withdrawal of this rejection is respectfully requested.

Conclusion

Applicant believes this reply is fully responsive to all outstanding issues and places this application in condition for allowance. If this belief is incorrect, or other issues arise, the Examiner is encouraged to contact the undersigned or his associates at the telephone number listed below. Please apply any charges not covered, or any credits, to Deposit Account 50-0591 (Reference Number 04558/053001).

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Respectfully submitted,

By


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